RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/552,930_
Source: _Pu/10_
Date Processed by STIC: _10/24/05_

ENTERED

1

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        RAW SEQUENCE LISTING                    DATE: 10/24/2005
        PATENT APPLICATION:  US/10/552,930      TIME: 10:52:18

        Input Set : A:\FP-72201-PC.ST25.txt
        Output Set: N:\CRF4\10242005\J552930.raw

     3 <110> APPLICANT: Montana State University
     4       Dratz, Edward A.
     5       Mumey, Brendan M.
     6       Jesaitis, Algirdas J.
     8 <120> TITLE OF INVENTION: MAPPING DISCONTINUOUS ANTIBODY OR APTAMER EPITOPES FOR
PROTEIN
     9       STRUCTURE DETERMINATION AND OTHER APPLICATIONS
    11 <130> FILE REFERENCE: FP-72201-RMS
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/552,930
C--> 14 <141> CURRENT FILING DATE: 2005-10-14
    16 <150> PRIOR APPLICATION NUMBER: US 60/462,870
    17 <151> PRIOR FILING DATE: 2003-04-14
    19 <160> NUMBER OF SEQ ID NOS: 7
    21 <170> SOFTWARE: PatentIn version 3.3
    23 <210> SEQ ID NO: 1
    24 <211> LENGTH: 8
    25 <212> TYPE: PRT
    26 <213> ORGANISM: Artificial
    28 <220> FEATURE:
    29 <223> OTHER INFORMATION: Antibody Epitope
    31 <400> SEQUENCE: 1
    33 Val Pro His Pro Thr Trp Met Arg
    34 1               5
    37 <210> SEQ ID NO: 2
    38 <211> LENGTH: 372
    39 <212> TYPE: PRT
    40 <213> ORGANISM: Artificial
    42 <220> FEATURE:
    43 <223> OTHER INFORMATION: Antibody Epitope
    46 <220> FEATURE:
    47 <221> NAME/KEY: misc_feature
    48 <222> LOCATION: (20)..(90)
    49 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    51 <220> FEATURE:
    52 <221> NAME/KEY: misc_feature
    53 <222> LOCATION: (190)..(330)
    54 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid
    56 <400> SEQUENCE: 2
    58 Asp Glu Asp Glu Thr Thr Ala Leu Val Cys Asp Asn Gly Ser Gly Leu
    59 1               5                   10                  15
W--> 62 Val Lys Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    63              20                  25                  30
    66 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    67              35                  40                  45
```

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```
70 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
71     50                  55                  60
74 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
75 65                  70                  75                  80
78 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Tyr Asn Glu Leu Arg Val
79                  85                  90                  95
82 Ala Pro Glu Glu His Pro Thr Leu Leu Thr Glu Ala Pro Leu Asn Pro
83             100                 105                 110
86 Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr Phe Asn
87             115                 120                 125
90 Val Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu Tyr Ala
91     130                 135                 140
94 Ser Gly Arg Thr Thr Gly Ile Val Leu Asp Ser Gly Asp Gly Val Thr
95 145                 150                 155                 160
98 His Asn Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala Ile Met
99                 165                 170                 175
102 Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Tyr Leu Xaa Xaa Xaa
103             180                 185                 190
106 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
107     195                 200                 205
110 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
111     210                 215                 220
114 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
115 225                 230                 235                 240
118 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
119                 245                 250                 255
122 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
123             260                 265                 270
126 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
127     275                 280                 285
130 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
131     290                 295                 300
134 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
135 305                 310                 315                 320
138 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala Pro Pro Glu Arg Lys
139                 325                 330                 335
142 Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser Thr Phe
143             340                 345                 350
146 Gln Gln Met Trp Ile Thr Lys Gln Glu Tyr Asp Glu Ala Gly Pro Ser
147             355                 360                 365
150 Ile Val His Arg
151     370
154 <210> SEQ ID NO: 3
155 <211> LENGTH: 8
156 <212> TYPE: PRT
157 <213> ORGANISM: Artificial
159 <220> FEATURE:
160 <223> OTHER INFORMATION: Antibody Epitope
162 <400> SEQUENCE: 3
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164 Glu Gln Gln Val Ser Thr Ala Gln
165 1              5
168 <210> SEQ ID NO: 4
169 <211> LENGTH: 9
170 <212> TYPE: PRT
171 <213> ORGANISM: Artificial
173 <220> FEATURE:
174 <223> OTHER INFORMATION: Antibody Epitope
176 <400> SEQUENCE: 4
178 Glu Gln Gln Ala Ser Ala Thr Thr Gln
179 1              5
182 <210> SEQ ID NO: 5
183 <211> LENGTH: 10
184 <212> TYPE: PRT
185 <213> ORGANISM: Artificial
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Stability Sequence
191 <220> FEATURE:
192 <221> NAME/KEY: misc_feature
193 <222> LOCATION: (3)..(6)
194 <223> OTHER INFORMATION: Xaa at positions 3-6 can be any amino acid, where up to 3 of
the
195       amino acids in positions 3-6 can be absent
197 <400> SEQUENCE: 5
W--> 199 Met Gly Xaa Xaa Xaa Xaa Gly Gly Pro Pro
200 1              5                  10
203 <210> SEQ ID NO: 6
204 <211> LENGTH: 5
205 <212> TYPE: PRT
206 <213> ORGANISM: Artificial
208 <220> FEATURE:
209 <223> OTHER INFORMATION: linker
211 <400> SEQUENCE: 6
213 Gly Ser Gly Gly Ser
214 1              5
217 <210> SEQ ID NO: 7
218 <211> LENGTH: 4
219 <212> TYPE: PRT
220 <213> ORGANISM: Artificial
222 <220> FEATURE:
223 <223> OTHER INFORMATION: linker
225 <400> SEQUENCE: 7
227 Gly Gly Gly Ser
228 1
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Input Set : A:\FP-72201-PC.ST25.txt
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; Xaa Pos. 20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38
Seq#:2; Xaa Pos. 39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57
Seq#:2; Xaa Pos. 58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76
Seq#:2; Xaa Pos. 77,78,79,80,81,82,83,84,85,86,87,88,89,90,190,191,192,193
Seq#:2; Xaa Pos. 194,195,196,197,198,199,200,201,202,203,204,205,206,207
Seq#:2; Xaa Pos. 208,209,210,211,212,213,214,215,216,217,218,219,220,221
Seq#:2; Xaa Pos. 222,223,224,225,226,227,228,229,230,231,232,233,234,235
Seq#:2; Xaa Pos. 236,237,238,239,240,241,242,243,244,245,246,247,248,249
Seq#:2; Xaa Pos. 250,251,252,253,254,255,256,257,258,259,260,261,262,263
Seq#:2; Xaa Pos. 264,265,266,267,268,269,270,271,272,273,274,275,276,277
Seq#:2; Xaa Pos. 278,279,280,281,282,283,284,285,286,287,288,289,290,291
Seq#:2; Xaa Pos. 292,293,294,295,296,297,298,299,300,301,302,303,304,305
Seq#:2; Xaa Pos. 306,307,308,309,310,311,312,313,314,315,316,317,318,319
Seq#:2; Xaa Pos. 320,321,322,323,324,325,326,327,328,329,330
Seq#:5; Xaa Pos. 3,4,5,6

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7

VERIFICATION SUMMARY   DATE: 10/24/2005
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L:13 M:270 C: Current Application Number differs, Replaced Current Application Number
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:62 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:16
M:341 Repeated in SeqNo=2
L:199 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
```